Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A transgenic mouse ~~mammal~~ comprising a recombinant nucleic acid molecule stably integrated into the genome of said mouse ~~mammal~~, said recombinant nucleic acid molecule comprising an E2F responsive promoter selected from the group consisting of an E2F-1 promoter, a dihydrofolate reductase promoter, a DNA polymerase alpha promoter, a c-myc promoter, and a B-myb promoter operably linked to a nucleic acid encoding a bioluminescent protein.

2. (Currently amended) The mouse ~~mammal~~ of claim 1, wherein said E2F responsive promoter is capable of binding a polypeptide selected from the group consisting of pRB, p107, p130, E2F1, E2F2, E2F3, E2F4, E2F5, E2F6, E2F7, G1 cyclin, and a cyclin-dependent kinase.

3. (Canceled)

4. (Currently Amended) The mouse ~~mammal~~ of claim 1, wherein said E2F responsive promoter is human E2F-1 promoter.

5. (Currently Amended) The mouse ~~mammal~~ of claim 1, wherein said E2F responsive promoter comprises SEQ ID NO: 1.

6. (Currently Amended) The mouse ~~mammal~~ of claim 1, wherein said bioluminescent protein is selected from the group consisting of ferredoxin IV, green fluorescent protein, red fluorescent protein, yellow fluorescent protein, the luciferase family, and the aequorin family.

7. (Canceled)

8. (Currently Amended) An isolated cell from [[of]] the mouse ~~mammal~~ of claim 1.

9. (Canceled)

10. (Canceled).

11. (Currently Amended) The mouse ~~mammal~~ of claim 1 [[2]], wherein binding of said polypeptide to said E2F responsive promoter increases the production of said bioluminescent protein.

12. (Canceled)

13. (Currently Amended) A method for the production of a transgenic mouse ~~mammal~~, comprising introduction of a recombinant nucleic acid molecule into a germ cell, an embryonic cell, an egg cell or a cell derived therefrom, said recombinant nucleic acid molecule comprising an E2F responsive promoter selected from the group consisting of an E2F-1 promoter, a dihydrofolate reductase promoter, a DNA polymerase alpha promoter, a c-myc promoter, and a B-myb promoter operably linked to a nucleic acid encoding a bioluminescent protein.

14. (Canceled)

15. (Canceled)

16.(Withdrawn) A method for the identification of a compound capable of modifying an activity of E2F, comprising: a) contacting the transgenic mammal of claim 1 or a cell isolated therefrom with a test compound; and b) measuring the effect of said test compound on said E2F responsive promoter, thereby identifying a compound that modifies an activity of E2F.

17. (Withdrawn) The method of claim 16, wherein said compound increases E2F binding to an E2F responsive promoter.

18. (Withdrawn) The method of claim 16, wherein said compound decreases E2F binding to an

E2F responsive promoter.

19. (Withdrawn) A method for detecting a proliferating cell, comprising: a) admininistering luciferin to the mouse of claim 12; and b) measuring with a photodetector device, photon emission through opaque tissue, thereby detecting a proliferating cell.

20. (Withdrawn) A method for detecting a proliferating cell, comprising: a) contacting an isolated nucleic acid and a cell suspected of being a proliferating cell, said nucleic acid comprising an E2F responsive promoter operably linked to a nucleic acid encoding a bioluminescent protein, such that the nucleic acid enters into said cell and said bioluminescent protein is produced; and b) detecting said produced bioluminescent protein, thereby detecting the proliferating cell.

21. (Withdrawn) The method of claim 20, wherein the proliferating cell is a cancer-associated cell.

22. (Withdrawn) The method of claim 21, wherein the cancer is selected from the group consisting of brain cancer, glioma, lung cancer, liver cancer, breast cancer, Burkitts lymphoma, Hodgkin's disease, cervical cancer, ovarian cancer, and retinoblastoma.

23. (Withdrawn) The method of claim 20, wherein the nucleic acid further comprises a vector.

24. (Withdrawn) The method of claim 23, wherein said vector is selected from the group consisting of plasmid vectors and viral vectors.

25. (Withdrawn) The method of claim 20, wherein said E2F responsive promoter is capable of binding a polypeptide selected from the group consisting of pRB, p107, E2F1, E2F2, E2F3, E2F4, E2F5, E2F6, G1 cyclin, a cyclin-dependent kinase and E1A.

26. (Withdrawn) The method of claim 20, wherein said E2F responsive promoter is selected from the group of promoters consisting of E2F-1 promoter, dihydrofolate reductase promoter,

DNA polymerase alpha promoter, c-myc promoter, and B-myb promoter.

27. (Withdrawn) The method of claim 20, wherein said E2F promoter comprises SEQ ID NO: 1.

28. (Withdrawn) The method of claim 20, wherein said bioluminescent protein is selected from the group consisting of ferredoxin IV, green fluorescent protein, red fluorescent protein, yellow fluorescent protein, the luciferase family, and the aequorin family.

29. (Withdrawn) A non-invasive method for localizing a malignant cell in a subject, comprising: a) introducing to the subject a nucleic acid comprising an E2F responsive promoter operably linked to a nucleic acid encoding a bioluminescent protein, such that the nucleic acid enters into said cell and said bioluminescent protein is produced; and b) detecting the bioluminescent protein, thereby localizing said malignant cell in said subject.

30. (Withdrawn) A method for localizing cancerous tissue in a subject, comprising: a) introducing to the subject a nucleic acid comprising an E2F responsive promoter operably linked to a nucleic acid encoding a bioluminescent protein, such that the nucleic acid enters into one or more cells of the cancerous tissue, and said bioluminescent protein is produced in said one or more cells; and b) detecting the bioluminescent protein, thereby localizing said cancerous tissue in said subject.

31. (Withdrawn) A method of determining the efficacy of an anti-tumor compound in a subject, comprising: a) introducing to the subject a nucleic acid comprising an E2F responsive promoter operably linked to a nucleic acid encoding a bioluminescent protein, such that the nucleic acid enters into one or more cells of the tumor tissue and said bioluminescent protein is produced in said one or more cells; b) measuring the luminescence of said bioluminescent protein prior to administration of the anti-tumor compound; c) administering the anti-tumor compound to the subject; d) measuring the luminescence of said bioluminescent protein following administration of the anti-tumor compound; and e) comparing the luminescence of said bioluminescent protein prior to and following administration of the anti-tumor compound, thereby determining the efficacy of said anti-tumor compound in said subject.

32. (Withdrawn) A method for the identification of a compound capable of modifying an activity of E2F, comprising: a) contacting an isolated cell containing a nucleic acid comprising an E2F responsive promoter operably linked to a nucleic acid encoding a bioluminescent protein with a test compound; and b) measuring the effect of said test compound on said E2F responsive promoter, thereby identifying a compound that modifies an activity of E2F.

33. (Withdrawn) The method of claim 32, wherein said compound increases E2F binding to an E2F responsive promoter.

34. (Withdrawn)The method of claim 32, wherein said compound decreases E2F binding to an E2F responsive promoter.

35. (New) A transgenic mouse-comprising a recombinant nucleic acid molecule stably integrated into the genome of said mouse, said recombinant nucleic acid molecule comprising an E2F responsive promoter selected from the group consisting of, a dihydrofolate reductase promoter, a DNA polymerase alpha promoter, a c-myc promoter, and a B-myb promoter operably linked to a nucleic acid encoding a bioluminescent protein.

36. (New) A method for the production of a transgenic mouse, comprising introduction of a recombinant nucleic acid molecule into a germ cell, an embryonic cell, an egg cell or a cell derived therefrom, said recombinant nucleic acid molecule comprising an E2F responsive promoter selected from the group consisting of a dihydrofolate reductase promoter, a DNA polymerase alpha promoter, a c-myc promoter, and a B-myb promoter operably linked to a nucleic acid encoding a bioluminescent protein.